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The Audit Method Research on Enterprise and Institution Information Technology Projects Invested by Government

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Abstract

In China, enterprise and institution information projects which are invested by the government are occupying an increasingly important location. Some of these projects need a lot of money; someone has a duty to guide the development of the industry, and so on. How to monitor these key areas investment effectively, promote the sound development of investment projects, and lead project to a right way are expected to play the leading role of the government department business. Traditionally, the government examines the entire project, which includes project pre-feasibility study, project determination reports rule, project mid-term examination, and accreditation council before the project is completed. However, because the accreditation council is usually as short as several hours, specialists just can check the files which the auditee expects the auditor to examine and can't have a real perception about the project. This kind of conclusion is not powerful enough to persuade investors to invest in the follow-up project. In order to make up for the lack of management bugs, government imports a new method, Information Theory Audit (IT audit).

IT audit is a very meaningful process. Through on-site survey, verification of documents, and personnel-related dialogue, auditors, who are experienced in the industry, will know the actual situation of the project. Then, auditors can provide the correct suggestions for investors.

Business investment projects are different from government investment projects. The latter not only have economic benefits needs, but also social benefits needs, and public governance benefits needs. COBIT cannot meet government standards for social investment projects, and the measure of public management. Based on the actual IT audit work for government investment projects, the author sums up a unique method of IT audit for these kinds of projects.

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1. Analysis of the research background

IT audit originated in the United States in the 1960s. In the early 1960s, IBM published "electronic data processing audit" and "The audit rules and organization methods with electronic data processing ", which rule new internal audit rules and organizational methods within electronic data processing environment. In 1968, the United States Institute of Certified Public Accountants published "Accounting Audit and Computer", which had made technical requirements for IT audit. In 1969, the International Information Systems Audit and Control Association (referred to as ISACA) set up. This is the only international organization in the IT audit field so far. In 1977, the United States Institute of Internal Auditors issued the famous paper "Auditing possibility and rules research in system." In 1985, the Industrial Policy Bureau of Japan issued "IT auditing standards," and added the "IT auditors test" in the whole of the Japanese software proficiency test for the aim to cultivated talents engaged in IT audit. From the 1990s, with the continuous development of information technology, IT audit has been developing rapidly. ISACA, which headquartered in Chicago, has set up 160 branches in more than 100 countries and regions, institute and promulgated the IT auditing standards and practice guidelines, and so on. These rules can provide norms and guidelines for IT auditors. The association organizes the annual CISA examination. The staff (that is, CISA) that passes the qualifying examination can make independent IT audit according with IT auditing standards and practice guidelines. In the United States, Japan and other developed countries, IT audit has been universal.

In our country, especially after the accession to the WTO, with the explosive growth of information degree, enterprise IT audit has been vigorously promoted. Hu Kejin, who is a professor of Tongji University, has made tremendous contributions for enterprises IT audit.

But the audit of government investment in information technology project assesses not only economic benefits, but also social benefits and public governance (Jia Wei, 2005). How to assess social benefits and public management in IT audit is focused on the content of this article.

2. Research methods exploration

The author made an audit to the government investment information project through the cooperation with the government. And the departments involved are some enterprises, public institutions and government agencies. The author divide the auditing into three sessions, based on the preparation of the related knowledge, with the consideration of IT audit rules, such as COBIT, ISO17799/27001、ISO13335、ISO20000、ITIL、SSE-CMM、PCAOB2 auditing standards Basel II、BCM、COSO/ERM, and so on., adopting IT auditing testing methods, with the combination of the enterprises' actual situation and the requirement of the institution in charge and after the through auditing to the information system.

2.1. Session one: project completion degree auditing

The definition of the project completion degree audit is as following: recalculate the related data and get the investment profit index, based on the actual data after project running; and have a comparison between the actual data and the predicted value, and evaluate the deviation and analyze the reasons to enhance the actual investment profit and draw up the related investment planning services and offer experience and feedback information to the future decision. Therefore, the project completion degree should be ranked five.

First grade: Failure: the project goal is unrealistic and can't be achieved and it should be stopped with the comparison of the cost.

Second grade: Unsuccessful: the success probability is small, it rarely profit with the comparison of the cost.

Third grade: Partial success: part goals of the project have come true, it only achieve a certain profit with the comparison of the cost.

Fourth grade: Successful: most goals have achieved. The project has achieved its expectation with the comparison of the cost.

Fifth grade: Completely successful: all goals have been achieved, and get great profit with the comparison of the cost.

2.2. Session two: project application results audit

The so-called project application results audit is to conduct the project management assessment by four aspects, such as IT business operations, strategy performance, financial performance, Performance management arrange, Cognitive performance management. With the aim to evaluate whether the audited sides adopt an effective mechanism to enable IT organizations to complete the application of the mandate entrusted to it, at the same time to balance the information technology and the risks of the process, to ensure the realization of the strategic objectives of the organization. Accordingly, project application results will be divided into five grades by acceptance.

First grade: not agree

Second grade: uncertain

Third grade: agree

Fourth grade: recognition

Fifth grade: totally agree

2.3. Session three: the audit of the process, the operations and maintenance of project

The so-called audit of the process, the operations and maintenance of project refers to its four aspects including the project in the planning and organization, process management, delivery and support, the safety management as well, so as to confirm the validity of the strategy about the information technology and the benefit of the business objectives; to ensure that IT solutions can be integrated into the entire commercial process; to ensure that the program of the investment about the IT project that has been selected is a process in control, and this process is in line with the relevant standards; to ensure the needs of the information services real and the related services of the information in a controllable manner; to do the assessment about the quality and the completion of all of the IT programs within the necessary time, in order to ensure that it is in control and can be carried on in accordance with the rules; to ensure that the IT environment is in line with the expected conditions. Accordingly, all the indicators of the process of the project and the audit of operations and maintenance can be divided into five levels:

First grade: The initial level: The existence of the problems and the necessary talk has been aware of while there is no standard treatment.

Second grade: The reusable level: Different people engaging with the same task follow with the similar procedures, and the individual will be in charge of the responsibility.

Third grade: The definitive level: The procedures of the transaction processing are calibrated and documented, and it is based on the form of the system of the existing practice.

Fourth grade: The management level: The procedure is monitored and measured for its effectiveness, and some actions are taken to regulate the disposal that is of a non-effective operation.

Fifth grade: The optimization level: The disposal has been refined to the most practical level, and the results that are based on the sustainable development and the mature modeling of other organizations have been achieved.

These three aspects cover all the IT audit aspects. Each selected indicator in every session is divided into five grades. Through the overall analysis for each part's five levels, we use the weighted average method to form the project's overall assessments. This evaluation is divided into corresponding five levels:

First grade: failure
 Second grade: reform,
 Third grade: pass
 Fifth grade: good
 Fifth grade: excellent

3. The application case studies

Based on the above analysis, the government investment and an investment company undertake the project of information-based platform, introduced the IT audit process.

IT audit procedures include pre-trial preparation, on-site audit, communication and exchange of views, and so on. On-site audit, include on-site viewing the physical environment. It viewed the application of the test reports and viewed related information of the project document. It checked the staffs of related technology projects information, asked about the contents of the document. It inspected the reviewing records and published notice of technology projects information. It inspected the reviewing of the validity of the assessment records of technology projects information. It inspected the specific details of the incidents of technology security projects records information. Through on-site and off-site interviews, observation and on-site testing, read documents, investigate the role of relevant information of information systems to verify the authenticity. Use the developing the audit system to audit on-line system. Accept and recognize the independent third-party evaluation of the relevance, assessment, survey, the use of the report.

Specifically, the audit points for the following three steps:

First step, the audit and to be audited communicate with each other about the IT audit contents, the audit provided a list of required information to another, and explain them. Based on the auditor of the unit who are responsible for IT audit extent of understanding, This process required more or less the time for half a day to day.

For the first time after the end of the communication, taking 3-5 days waiting for the audit to collate the information and write a list of information sheet.

Second step, on-site audit checked the project on-site survey of hardware and software implementation in the audit side. Understand the whole process of project results. For the information provided by the combination of the audit questionnaire and the charging of the project-related conduct in-depth communication about strategy, implementation and all of technical related issues, then mark the findings of the survey.

After the second communication, take five working days to write the audit report writing time in accordance with the findings of the audit.

Third step, both sides communicate on-site about the audit report, submit opinions on the second on-site auditor, then implement and identify. The two sides eventually agreed on the contents of the report

After the third communication, the auditor submits the audit reports to the department in charge of the audit report and audited side (Wei Zhong & Zhi Luping. 2008).

4. Conclusions

According to the author's experience in auditing, if the investment of an information project which government invest on is for an enterprise, the degree of the completion of the project and the effect of the project application scores high, while the process of project and operating maintenance have low scores. This problem is due to the act that the enterprise focuses on efficiency, but ignoring the document management. For the investment that send to institutions or government agencies, the process of project and operating maintenance have high scores, with closely related to the importance that institutions and government agencies attach to document management.

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